

Attorney Docket No.: 01CON263P-CIP
Application Serial No.: 10/061,171

List of Claims:

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Claims 1-7 (Cancelled)

Claim 8 (Currently Amended): A method of data communication over a first time division multiplexed bus, including one or more digital signal lines, said method comprising:

- determining whether an incoming call is a voice call or a data call;
- receiving an analog data signal over a voiceband of a telephone line from a first analog modem for said data call;
- utilizing a linear coding process to generate a plurality of digitized analog data signal samples from said analog data signal;
- transmitting said plurality of digitized analog data signal samples via said one or more digital signal lines of said first time division multiplexed bus to a second analog modem;
- demodulating said plurality of digitized analog data signal samples by said second analog modem to generate digital data;
- transmitting said digital data by said second analog modem over one or more digital signal lines of a second time division multiplexed bus;
- utilizing a non-linear coding process to generate a plurality of digitized analog voice signal samples from an analog voice signal received over said voiceband of said telephone line for said voice call; and
- transmitting said plurality of digitized analog voice signal samples via one or more digital signal lines of a third time division multiplexed bus.

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Claim 9 (Original): The method of claim 8, wherein said linear coding process uses a sampling rate of about 16 kHz with an 8 bits/sample.

Claim 10 (Previously Presented): The method of claim 8, wherein said second analog modem is a digital loop carrier modem.

Claim 11 (Original): The method of claim 8, wherein said digital data reach a remote access server over an IP link.

Claim 12 (Previously Presented): The method of claim 8, wherein said transmitting said digital data transmits said digital data via two of said one or more digital signal lines of said second time division multiplexed bus.

Claim 13 (Previously Presented): The method of claim 8, wherein prior to said receiving, said method further comprises determining said first analog modem to be capable of supporting a speed of 64kbps or more.

Claim 14-19 (Cancelled)

Claim 20 (Currently Amended): A data communication system for communication with a first modem over a telephone line, said communication system comprising:

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a receiver capable of receiving an analog data signal over a voiceband of a telephone line from a first analog modem for a data call;

a processor capable of applying a linear coding process to said analog data signal to generate a plurality of digitized analog data signal samples;

a transmitter capable of transmitting said plurality of digitized analog data signal samples via one or more digital signal lines of a first time division multiplexed bus;

a second analog modem in communication with said first time division multiplexed bus;

wherein said second analog modem receives said plurality of digitized analog data signal samples via said one or more digital signal lines of said first time division multiplexed bus, demodulates said plurality of digitized analog data signal samples to generate digital data, and transmits said digital data over one or more digital signal lines of a second time division multiplexed bus; and

wherein a non-linear coding process is utilized to generate a plurality of digitized analog voice signal samples from an analog voice signal received over said voiceband of said telephone line for a voice call, and said plurality of digitized analog voice signal samples are transmitted via one or more digital signal lines of a third time division multiplexed bus.

Claim 21 (Original): The communication system of claim 20, wherein said linear coding process uses a sampling rate of about 16 kHz with an 8 bits/sample.

Claim 22 (Previously Presented): The communication system of claim 20, wherein said second analog modem is a digital loop carrier modem.

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Claim 23 (Original): The communication system of claim 20, wherein said digital data reach a remote access server over an IP link.

Claim 24 (Previously Presented): The communication system of claim 20, wherein said second modem transmits said digital data via two of said one or more digital signal lines of said second time division multiplexed bus.

Claim 25 (Previously Presented): The communication system of claim 20, wherein prior to said receiver receiving said analog data signal, said processor determines whether said first analog modem is capable of supporting a speed of 64kbps or more.